

Manuel
1913

U. S. DEPARTMENT OF AGRICULTURE

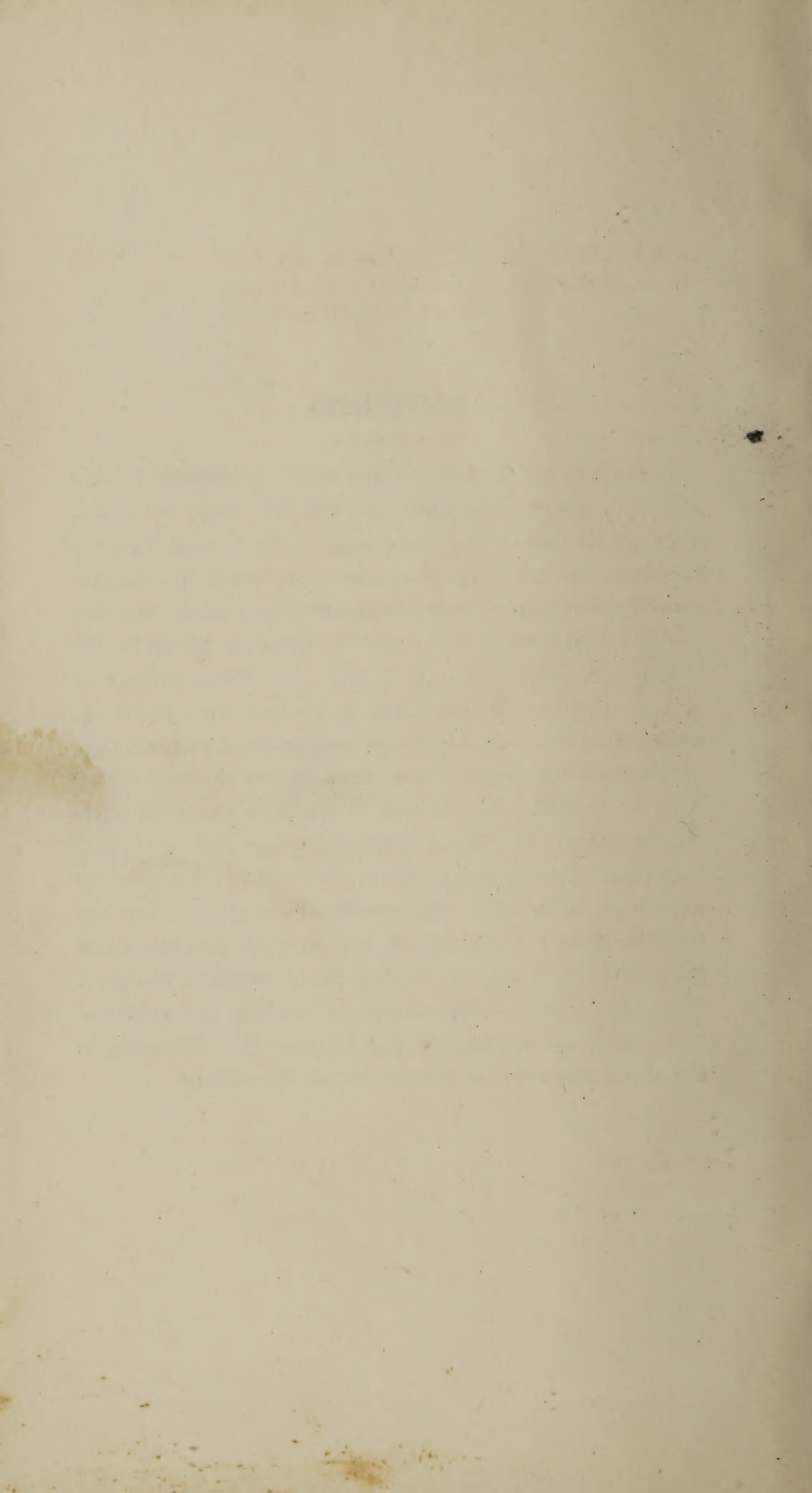
BUREAU OF PLANT INDUSTRY

FIELD NOTES

FORAGE CROP INVESTIGATIONS

INSTRUCTIONS.

In case of a series of row or plat tests it is desirable to have all the constant conditions recorded for future reference. This can be done on the blank pages in the front of the book for all points not covered by the topic headings. In case several sets of experiments are recorded in a single book the conditions governing each may be given by filling in the outlines provided. (See pp. 7-11.) The blank pages may also be used for any additional data which seem desirable, such as the high, low, and mean temperatures, rainfall, date of the last killing frost in the spring, and of the first killing frost in the fall. At the back of the book are blank pages for convenience in making field calculations and temporary notations. Row numbers should be listed in the order that they occur in the field. Records should be made in rate per cent wherever possible and in such manner that the better the variety or strain the higher the percentage recorded. Rules given under "Explanation of heading and abbreviations used" should be followed, in order that the notes on any given crop may be uniform for all the stations.



EXPLANATION OF HEADINGS AND ABBREVIATIONS USED IN TAKING FIELD NOTES IN FORAGE-CROP INVESTIGATIONS.

SIZE OF PLAT.—Stated in fractions of an acre, as $\frac{1}{5}$, $\frac{1}{10}$, etc., or if nursery rows, length of the row in feet.

RATE OF SEEDING.—Pounds per acre.

STAND.—Given in percentages or number of plants in the row.

DATE.—Given in figures, as 9-15 (September 15).

UNIFORMITY.—Given in percentages.

VIGOR.—Strength or abundance of growth: *p.*=poor; *f.*=fair; *g.*=good; *ex.*=excellent.

CONDITION.—If the crop is biennial or perennial, give percentages showing what portion has survived the winter.

FOLIAGE COLOR.—Indicate the shade of green as follows: *g.*=green; *l. g.*=light green; *d. g.*=dark green; *y. g.*=yellowish green; *g. g.*=grayish green; *p. g.*=purplish green. The superlative degree of any of these colors may be indicated by placing *v.* before the color abbreviations, as follows: *v. l. g.*=very light green.

HABIT OF GROWTH.—Described by the following terms: *e.*=erect; *s. e.*=suberect; *d.*=decumbent (prostrate, tip ascending); *p.*=procumbent (trailing); *v.*=vining; *b.*=bushy.

STEMS PER PLANT.—Average number of stems produced from one seed, as 7-8.

MEASUREMENTS.—Given in inches unless otherwise indicated.

DISEASE RESISTANCE.—Give the percentage of noninfection, best determined by estimating the percentage of infection and subtracting this from 100.

DROUGHT RESISTANCE.—Indicate the comparative vigor of plants under conditions of drought, as follows: *p.*=poor; *f.*=fair; *g.*=good; *ex.*=excellent.

LODGING.—Described as *none*, *little*, *medium*, *much*.

SHATTERING.—Described as *none*, *little*, *medium*, *much*.

QUALITY.—Indicated as follows: *p.*=poor; *f.*=fair; *g.*=good; *ex.*=excellent.

ABBREVIATIONS.

GENERAL.—*v.*=very; *med.*=medium; *p.*=poor; *g.*=good; *ex.*=excellent (indicates an unusually high degree, seldom occurring); *l.*=little; *m.*=much; *o*=none or nothing; *lg.*=long; *s.*=short; *sm.*=small; *lrg.*=large; *ab.*=abundant; *few*=few; *cs.*=coarse; *sl.*=slender.

COLOR.—*v.*=violet; *i.*=indigo; *b.*=blue; *g.*=green; *y.*=yellow; *o.*=orange; *r.*=red; *pur.*=purple; *pk.*=pink; *l.*=light (used before a color); *d.*=dark (used before a color).

SHAPE.—*ov.*=oval; *rd.*=round; *obl.*=oblong; *lin.*=linear; *obo.*=obovate; *cor.*=cordate; *cyl.*=cylindrical; *elip.*=elliptical.

Page 1-5

Variety _____ Test of soy beans, 19/3

Object _____

Location Monetta. S. C.

Kind of soil Sandy = Clay. Subsoil. 12 to 14 inches

Character of field Nearly. Level

Previous crop Cotton

Preparation of seed bed _____

1. Broke. up.

2. Laid off. & Bedded out 4 furrows

3. to Row.

4. Put in Fertilizer Bedded. Back 4 furrows

5. Harrowed. off. Beds & Planted seeds

6. _____

Seeding method Drilled

Pages 7-10

Plot Test of soy beans, 19/3

Object _____

Location Monetta. S. C.

Kind of soil Sandy. Clay. Subsoil 12 to 14 inches

Character of field Nearly. Level

Previous crop Cotton

Preparation of seed bed _____

1. _____

2. The. Same. preparation as above

3. _____

4. _____

5. _____

6. _____

Seeding method Drilled .

Pages 11-14

Plot Test of cornmeal, 1913

Object

Location Monetta, S.C.

Kind of soil Sandy clay subsoil 12 to 14 inches

Character of field Nearly Level

Previous crop Cotton

Preparation of seed bed

1. The Same Preparation

2.

3.

4.

5.

6.

Seeding method Dropped in Hills =

Pages 15-18

Variety Test of sorghums, 1913

Object

Location Monetta S.C.

Kind of soil Sandy clay subsoil 12 to 14 inches

Character of field Nearly Level

Previous crop Cotton

Preparation of seed bed

1.

2. The Same preparation

3.

4.

5.

6.

Seeding method Drilled

Test of mixtures, 1913

Object

Location Monetta S.C.

Kind of soil Sandy. Clay subsoil 12 to 14 inches

Character of field Nearly Level

Previous crop Cotton

Preparation of seed bed

1. The same preparation =

2.

3. and Harrowed in.

4.

5.

6.

Seeding method Sown, Broadcast.

Variety Test of adzuki beans, 1913

Object

Location Monetta S.C.

Kind of soil Sandy. Clay subsoil 12 to 14 inches

Character of field Nearly Level

Previous crop Cotton

Preparation of seed bed

1.

2. The same preparation

3.

4.

5.

6.

Seeding method Drilled

Plot

Test of Tunis grass, 1913

Object

Location

Monetta Sb

Kind of soil

Sandy Clay. Subsoil 12 to 14 inches

Character of field

Nearly Level

Previous crop

Cotton

Preparation of seed bed

1. The same preparation

2.

3.

4.

5.

6.

Seeding method

Drilled

Plot

Test of Sudan grass, 1913

Object

Location

Monetta Sb.

Kind of soil

Sandy Clay Subsoil 12 to 14 inches

Character of field

Nearly Level.

Previous crop

Cotton.

Preparation of seed bed

1. The same preparation

2.

3.

4.

5.

6.

Seeding method

Drilled

Test of _____, 19

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

Test of _____, 19

Object _____

Location _____

Kind of soil _____

Character of field _____

Previous crop _____

Preparation of seed bed _____

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

Seeding method _____

1

+ Soy bean Varieties to be saved

No.	Variety	Length of row	Width of row	Date sown	Date up.	Stand no. of plants	Stand Uniformity
				5-20	5-30		
25118+		91 ft.	3 ft.	5/20			
25438+		91 ft.	3 ft.	5/20			
30478		91 ft.	3 ft.	5/20			
30593		91 ft.	3 ft.	5/20			
30596		91 ft.	3 ft.	5/20			
30598		91 ft.	3 ft.	5/20			
30599		91 ft.	3 ft.	5/20			
30600		91 ft.	3 ft.	5/20			
30744		91 ft.	3 ft.	5/20			
30745		91 ft.	3 ft.	5/20			
30746		91 ft.	3 ft.	5/20			
30747		91 ft.	3 ft.	5/20			
31802+	5 Rows =	91 ft.	3 ft.	5/20			
31803+	2 Rows =	264	3 ft.	5/20			
31804+	4 Rows	91 ft.	3 ft.	5/20			
34857		91 ft.	3 ft.	5/20			
30839+		45 ft.	3 ft.	5/20			
30840+		45	3 ft.	5/20			p
30841+				5/21			
32361+				5/21			

Bloom		Maturity		Stems		
Date	Color	Date cut	Season	Diameter	Height	Type
			Dec		In.	
8/25	b			—	66	V
	b-w	10/13	146	—	36	B
7-12	b.	10/6	139	—	22	B
7-11	b.	8/27	99	—	10	B
7-11	vr.			—	14	B
7-12	L.b.			—	28	B
7-2	L.b.	8/27	99	—	15	B
7-2	b.	8/27	99	—	8	B
7-4	vr.b.	8/27	99	—	15	B
7-2	vr.b.	8/27	99		12	B
7-10	vr.b.	8/27	99		10	B
7-4	vr.b.					
		9/22	125		32	B
7-11	b	9/3	106		30	✓
7-15	b	9/3	106		10-30	B
		10/6	134		36	B
					60	V
					48	V
					48	V
8/27	b	10-29	162		48	B

Branches			Leaves		
Habit No.	Height	No.	Color	^{1st} yellow leaves	Persisting

Pods			Pubescence	Seed	Insect
First mature	Seeds per pod	Pods per node	Color	Amount color	Damage

5.71 — 2.5

6.02 — 2.5

5.2 — 2.5

4.4 — 2.5

7.2 — 2.5

7.51 — 2.5

6.11 — 2.5

Diseases			Seed	yield	Rank
Rust	Wilt	Nema- tode	Lbs.	per acre	

Bus
6 1/2 15.7 19.3

7 1/2 18.1 20.0

2 ~~4.4~~ 5.3

27 14.4

19 1/2 ~~29.2~~ 8.7

27 16.8

8 21.3

= note =

= * 32361 only a few pods matured
a fine Bean if it was not so late

= note = Soy Beans * 30839 = 30840 =
and 30841 has been Killed by
~~Frost~~ = only. had very young Pods
Oct 20th 1913 =

Soy bean Plots

No.	Variety	No. of rows	Length of rows	Width of rows	Date Sown	Date up	Date of bloom
F.C. 3747		5		3 ft.	5-22 5/22	5-31	7-11
F.C. 3747		5		3 ft.	5/22		7-11
14953	Edward	5		3 ft.	5/22		
14953		5		3 ft.	5/22		
23232	Bardett	5		3 ft.	5/22		
23232		5		3 ft.	5/22		
25118		5		3 ft.	5/22		
25118		5		3 ft.	5/22		
25135		5		3 ft.	5/22		
25135		5		3 ft.	5/22		
26836	Hollybrook	5		3 ft.	5/22		7-12
26836		5		3 ft.	5/22		7-12
25438		5		3 ft.	5/22		
25438		5		3 ft.	5/22		
27707		5		3 ft.	5/22		
27707		5		3 ft.	5/22		
30478		5		3 ft.	5/22		
30478		5		3 ft.	5/22		7-12
34857		5		3 ft.	5/22		
34857		5		3 ft.	5/22		

<u>Maturity</u>		<u>Insect</u>	<u>Diseases</u>		
<u>Date</u> <u>cut</u>	<u>Season</u>	<u>Injury</u>	<u>Rust</u>	<u>Wilt</u>	<u>Nematode</u>

9-3 / 104

10/2 / 133

9-23 / 24

10/13 / 44

9-23 / 24

10-27 / 58

9-23 / 24

10-27 / 58

9-23 / 24

10/13 / 44

9-3 / 104

10/6 / 137

10/13 / 44

10/13 / 44

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9-3 / 104

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Forage	Seed	Green Cal. yield per acre	Seed cal. yield per acre
Green Dry	Lbs.	Tons	Bu.
340		3.7 3.74	9.33 10.3
	28		
615		6.71	
	33½		12.3
400		4.40	
	24		8.8
545		5.99	
	29¾		10.9
635		6.98	
	44		16.1
255		2.80	4.0
	12		4.0
	27.		9.9
	30½		11.2
425		4.65	
	32½		11.7
260		2.86	
	13½		4.7
575		6.32	
	52		19.1

Rank. Height Weight

48

B

48

B

54

B

54

B

60

V

60

V

60

V

60

V

48

B

48

B

26

B

26

B

36

B

36

B

54

V

54

V

30

B

30

B

36

B

36

B

No.	Variety	no. 3 row	Length 3 row	Width 3 row	Date Sown	Date up.	stand %
					5-23	5-31	
34905		5	132 ft	3 ft			45
34905		5	"	"			45
34906		5	"	"			45
34906		5	"	"			45
34908		5	"	"			45
34908		5	"	"			45

Date 3 bloom	Date 1st nodes ripe	Height	Date all nodes ripe	Breadth 3 row mass	Stems Habit Vigor
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9-15

9-15

9-15

9-15

8/30

8/30

Branches	Insect	Leaves	Seed	Cal. yield
No.	Length	Injury	No.	Shed

Bus.

44½ ~~14.8~~
16.3

34½ ~~11.5~~
12.6

Early 31 lbs ~~10.3~~
11.4

Early

Diseases

Red white
leafspot leafspot Rust Wilt Nematode Rank

None None

None None

None None

None None =

50.0% 10.0%

50.0% 10.0%

No.	Variety	Width B row	Length B row	Date planted	Rate planted	Date spr.	Germinat- ion - To
		3. ft	9. ft	5-20	5-30	5-30	
17539	Planter sorgo						
17548	Red Amber sorgo						
19517	Feterita						
29166	Fried sorgo						
32384	Mini. Amber						
32889	Orange sorgo						
32893	Goose-neck sorgo						
34911	Dwarf Blackhull kafir						
34925	Honey sorgo						
34985	McLean						
34986	Coleman						
35038	Sumac						
35047	Blackhull kafir						
35048	Dwarf milo						
35213	Early Amber						
	Cochin						
	Coles Evergreen						

Vigor of seedlings	Stand Distance between plants	Maternity To	Date first heads	Date first ripe heads	Date 90% ripe	Insect injury
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Uy	12m					
Uy						
Uy						
Uy					8/27	
Uy					8/27	
Uy					9/25	
Uy					9/15	
Uy					9/3	
Uy					9/25	
Uy					9/15	
Uy					9/20	
Uy					9/15	
Uy					9/3	
Uy					9/3	
Uy					8/27	

Smut resistance	Storm resist- ance	Field of forage			
		green	cal. per acre	dry	cal. per acre
Had grain		lbs		= Ripe =	
		165		153	
		161		150	
		106		100	
		60		50	Dead Ripe =
		128		120	
		157		150	
		200		164	
		97		90	
		163		154	
		144		140	
		128		120	
		100		90	
		101		80	

Seed yield

cal.
per
acre

Rank

Height

8 1/2

8 1/2

8

6

5 1/2

8

8

5 1/2

9 1/2

8

6

6

7 1/2

No.	Variety	no. of rows	width of rows	length of rows	Date sown	Date up	stand %
					5-23	6-2	
26301	Turnis	11	3 ft	9 ft			p

1st

Height bloom

60.

7. 8/27 - beginning to mature

8/29. Cut for Hay =

Weight - Green 381 lbs =

21

Sudan Grass.

No.	Variety	no.	length	width	Date sown	Date up	Stand To
		β rows	β rows	β rows			
					5-23	6-2	
25017	Sudan	11	91H	3 ft			Q

Height Mature

5'10"

8/27 - mature Badly rusted

8/29 Cut for Hay.

Weight Green 288 lbs =

No.	Mixture	Area	How sown	Date sown	Rate sown	Date up	Stand To
				5-23		6-3	
I-	Sudan grass Soy beans						
II-	Sudan grass Cowpeas						

Height	% of mixture	Date to bloom	Date 1st nodes ripe	Date cut for hay	Lbs.	Cal. yield per area
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Chickens. Scratched up Grass = Beans & Cowpeas
 Just after the come. up = "no stand"
 did not cut for Hay =

No.	Seed color	Length of row	Width of row	Date down	Date up	Stand	
						no. plants	Uniformity
#17847	.	45 ft	3 ft	5-22	5-31		
#17851		45 ft	3 ft	"	"		
#21082		45 ft	3 ft	"	"		
#21083		45 ft	3 ft	"	"		

Date	1st pods	<u>Stems</u>			
blooms	mature	Diameter	Height	Habit	Vigor

8/27

18

✓

18

✓

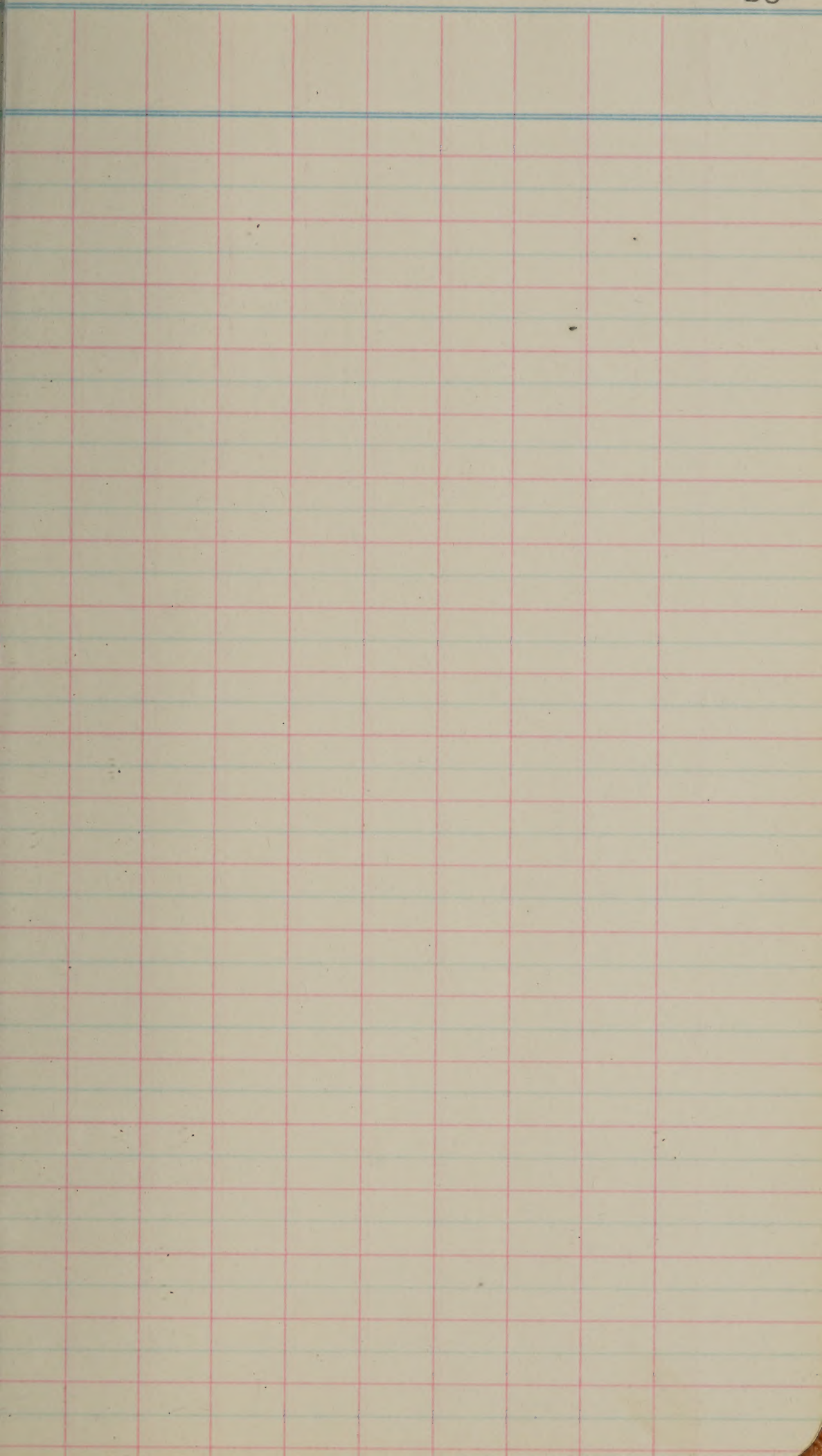
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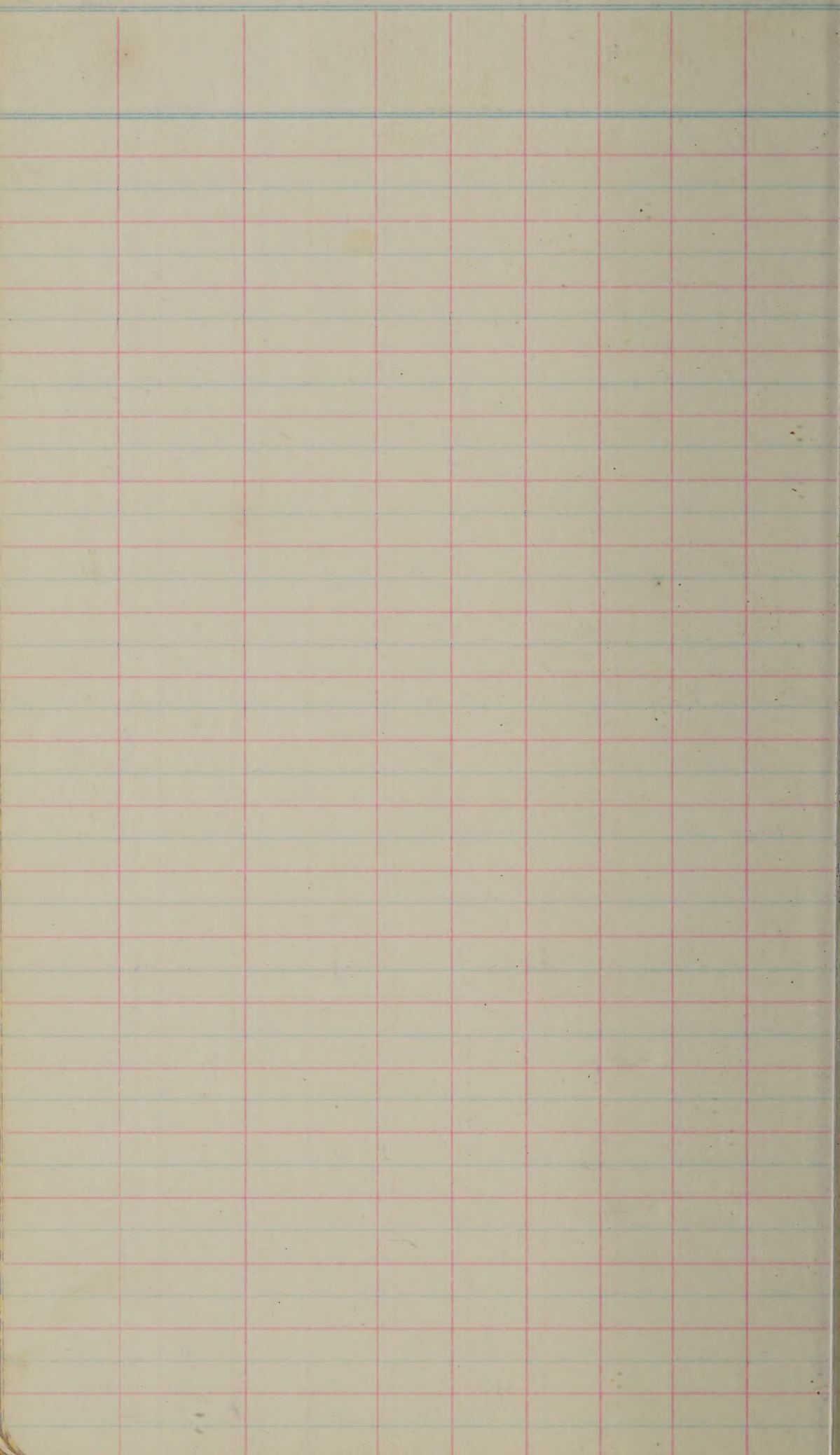
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✓

Leaves			Insect injury	Pods	
Size	No.	Shed		No.	color
				M	L
				M	L
				M	L
				M	L

<u>Diseases</u>				Date	Lbs.	Rank	Cal	
Milt	Nematode	Rust	Leaf-spot	all nodes ripe	3 seed		yield per acre	
							Bus	
10%				9/3	3. lbs	2	15.5	16.5
15%				9/3	2 1/4 "	1	12.4	12.4
20%				8/27	1 "	4	5.5	
12%				8/27	1 1/2 "	3	8.3	8.3





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Note. Groat Cowpeas = Leaves all shedded
off = and. Vines all nearly dead with
Wilt and. Nematodes = fairly Good Crops
of Fruit - matured =

**By using this frank no postage is required in
returning this book to the Office of
Forage-Crop Investigations.**

=Note= Soy Beans Was. Nearly free
from Nematodes = and found
Some wilt only on the Late
Varieties = not Enough to do any
Damage to the plants =

